(3)

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=> file caplus medline embase wpids biosis

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FILE 'BIOSIS' ENTERED AT 11:58:21 ON 29 NOV 2000
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=> s phytostenol# or phytosterol# or sitostenol# or sitostanol# or sitosterol#

L1 18440 PHYTOSTENOL# OR PHYTOSTEROL# OR SITOSTENOL# OR SITOSTANOL# OR SITOSTEROL#

=> s fatty(w)acid#

L2 535195 FATTY(W) ACID#

=> s unsaturat?(w)fatty(w)acid#

L3 35497 UNSATURAT?(W) FATTY(W) ACID#

=> s l1 and l3

L4 225 L1 AND L3

=> s hypocholest? or lower(n)cholest? or reduct?(s)cholest?

L5 53398 HYPOCHOLEST? OR LOWER(N) CHOLEST? OR REDUCT?(S) CHOLEST?

=> s l4 and l5

L6 11 L4 AND L5

=> d kwic ibib so l6 1-11

L6 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2000 ACS
TI Method for manufacturing fat-soluble **phytosterol** or phytostanol ester of **unsaturated fatty acid**
AB The present invention provides a method for manufg. fat-sol. **phytosterol** or phytostanol ester of **unsatd. fatty acid** for inhibiting the absorption of cholesterol and foodstuffs contg. the same. The method for manufg. fat-sol.

phytosterol or phytostanol ester of **unsatd.** **fatty acid** comprises the steps of: esterification of **phytosterol** or phytostanol with **unsatd.** **fatty acid** by dissolving them in a nonpolar org. solvent with a basic catalyst and adding a carboxyl group activating agent dissolved. . .

ST **phytosterol** fatty ester fat soluble prodn **cholesterol** absorption **redn**; phytostanol fatty ester fat soluble prodn **cholesterol** absorption **redn**; **sitosterol** oleate prodn esterification cholesterol lowering effect

IT Fatty acids, preparation
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(esters; method for manufg. fat-sol. **phytosterol** or phytostanol ester of **unsatd.** **fatty acid**)

IT 57-88-5, Cholesterol, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(method for manufg. fat-sol. **phytosterol** or phytostanol ester of **unsatd.** **fatty acid**)

IT 3712-16-1P, .beta.-**Sitosterol** oleate
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for manufg. fat-sol. **phytosterol** or phytostanol ester of **unsatd.** **fatty acid**)

IT 83-46-5, .beta.-**Sitosterol** 112-80-1, Oleic acid, reactions
RL: RCT (Reactant)
(method for manufg. fat-sol. **phytosterol** or phytostanol ester of **unsatd.** **fatty acid**)

ACCESSION NUMBER: 2000:742194 CAPLUS
DOCUMENT NUMBER: 133:323278
TITLE: Method for manufacturing fat-soluble **phytosterol** or phytostanol ester of **unsaturated fatty acid**
INVENTOR(S): Chung, Dae-Won; Noh, Seung-Kwon; Kim, Kab-Sig
PATENT ASSIGNEE(S): Eugene Science, Inc., S. Korea
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000061694	A1	20001019	WO 1999-KR569	19990921

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: KR 1999-12965 19990413
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
REFERENCE COUNT: 4
REFERENCE(S): (1) Henkel; WO 9925362 A1 1999 CAPLUS
(2) Raisio Benecol Oy; WO 9956558 A1 1999 CAPLUS
(3) Raision Margarini; WO 9219640 A1 1992 CAPLUS
(4) Tackett, T; US 5117016 A 1992 CAPLUS

L6 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2000 ACS

AB . . . plasma cholesterol level has a direct assocn. with coronary heart
disease, ischemic heart disease, acute myocardial infarction, and atherosclerosis. A **lower cholesterol** level reduces their risk. Among the plasma cholesterol fractions the low-d. lipoprotein
cholesterol and first of all its oxidized forms have strong relationship to the mentioned diseases. The chem. similar **phytosterols** in plants have favorable effect, they prevent the absorption of cholesterol from the intestine. The high-d. lipoprotein transports the cholesterol. . . may be influenced by nutrition. It looks advantageous the diet contg. low fat, low satd. fatty acids, low cholesterol, more **unsatd. fatty acids**, high consumption of fruits and vegetables, adequate intake of dietary fiber. The high-d. lipoprotein level will be in creased mainly. . .

ACCESSION NUMBER: 1999:521301 CAPLUS
DOCUMENT NUMBER: 131:228043
TITLE: The essential and accursed cholesterol
AUTHOR(S): Biro, Gyorgy
CORPORATE SOURCE: Budapest, Hung.
SOURCE: Elelmez. Ip. (1999), 53(6), 161-166
CODEN: EMIPAB; ISSN: 0013-5909
PUBLISHER: METE
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Hungarian
SO Elelmez. Ip. (1999), 53(6), 161-166
CODEN: EMIPAB; ISSN: 0013-5909

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2000 ACS
TI Use of mixtures containing **phytostenols** for producing **hypocholesteremic** preparations
AB Mixts. of active agents contg. (a) **phytostenols** and/or **phytostenol** esters and (b) conjugated fatty acids or their glycerides are used to produce **hypocholesteremic** prepns. These mixts. have a synergistic effect in reducing the cholesterol content of serum. When encapsulated in gelatin, the prepns.. . .
ST **hypocholesteremic phytostenol unsatd fatty acid**; synergistic **hypocholesteremic phytostenol** fatty acid
IT **Unsaturated fatty acids**
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diunsatd., with conjugated double bonds; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Sterol esters
Sterols
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(from plants; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Glycerides, biological studies
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyunsatd. fatty acid-contg., with conjugated double bonds; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Anticholesteremic agents
Butter
Capsules (drug delivery systems)
Cocoa products
Dietary food
Food
Margarine
Mayonnaise
Salad dressings

Sausage
Synergistic drug interactions
(use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

IT Polyunsaturated fatty acids
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with conjugated double bonds; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

IT Fatty acid esters
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with **phytostenols**; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

IT 83-45-4, .beta.-**Sitostanol** 83-45-4D, .beta.-**Sitostanol**, esters 83-46-5 83-46-5D, esters 1839-11-8D, 9,11-Octadecadienoic acid, esters with **phytostenols** 41005-65-6 109033-78-5
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

ACCESSION NUMBER: 1999:344854 CAPLUS
DOCUMENT NUMBER: 130:347399
TITLE: Use of mixtures containing **phytostenols** for producing **hypocholesteremic** preparations
INVENTOR(S): Fabry, Bernd
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9925362	A1	19990527	WO 1998-EP7059	19981105
W: AU, BG, BR, BY, CA, CN, CZ, HU, ID, IS, JP, KR, LT, LV, MX, NO, NZ, PL, RO, RU, SI, SK, TR, UA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19750453	A1	19990527	DE 1997-19750453	19971114
AU 9915603	A1	19990607	AU 1999-15603	19981105
EP 1028733	A1	20000823	EP 1998-959848	19981105
R: DE, ES, FR, GB, IT, NL				

PRIORITY APPLN. INFO.: DE 1997-19750453 19971114
WO 1998-EP7059 19981105
OTHER SOURCE(S): MARPAT 130:347399
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
REFERENCE COUNT: 7
REFERENCE(S):
(1) Funes; 1980, 5, CAPLUS
(2) Funes, C; AN ASOC QUIM ARGENT 1978, V66(5), P239
(3) Hasegawa; Hypocholesteraemic Effect of Linoleic Acid and Phytosterol 1984, 25, CAPLUS
(4) Hasegawa; JOSHI EIYO DAIGAKU KIYO 1983, V14, P165 CAPLUS
(5) Kosbab, J; WO 9833494 A 1998
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2000 ACS

AB . . . onto the Indian market for human use. RBO contains oleic acid (38.4%), linoleic acid (34.4%), and linolenic acid (2.2%) as **unsatd. fatty acids**, and palmitic (21.5%) and stearic (2.9%) acids as satd. fatty acids. The unsaponifiable fraction (4.2%) has total tocopherols (81.3 mg%),. . . and 24-methylene cycloartanol (494 mg%). Studies on exptl. rats demonstrated a hypolipidemic effect of RBO. The unsaponifiable fraction of RBO **lowers cholesterol** levels. Feeding **phytosterols**, CA, and 24-methylene cycloartanol in amts. present in RBO to hypercholesterolemic rats for 8 wk indicates that CA alone reduces. . . and triglyceride levels significantly. Endogenous sterol excretion increases in animals given CA. The accumulation of CA in the liver inhibits **cholesterol** esterase activity, which in turn leads to **redn.** in circulating **cholesterol** levels. CA is structurally similar to cholesterol and may compete with the binding sites of cholesterol and sequestrate cholesterol, which. . . derivs. RBO, which is rich in tocopherols and tocotrienols, may improve oxidative stability. Tocotrienols inhibit HMG CoA reductase, resulting in **hypocholesterolemia**. The hypolipidemic effect of RBO has also been established in human subjects. Thus, RBO could be a suitable edible oil. . .

ACCESSION NUMBER: 1992:127428 CAPLUS
DOCUMENT NUMBER: 116:127428
TITLE: Nutritional and biochemical aspects of the hypolipidemic action of rice bran oil: a review
AUTHOR(S): Rukmini, Cheruvanky; Raghuram, Thummala C.
CORPORATE SOURCE: Natl. Inst. Nutr., Indian Counc. Med. Res., Hyderabad, 500007, India
SOURCE: J. Am. Coll. Nutr. (1991), 10(6), 593-601
CODEN: JONUDL; ISSN: 0731-5724
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
SO J. Am. Coll. Nutr. (1991), 10(6), 593-601
CODEN: JONUDL; ISSN: 0731-5724

L6 ANSWER 5 OF 11 MEDLINE
AB . . . onto the Indian market for human use. RBO contains oleic acid (38.4%), linoleic acid (34.4%), and linolenic acid (2.2%) as **unsaturated fatty acids**, and palmitic (21.5%) and stearic (2.9%) acids as saturated fatty acids. The unsaponifiable fraction (4.2%) has total tocopherols (81.3 mg%),. . . and 24-methylene cycloartanol (494 mg%). Studies on experimental rats demonstrated a hypolipidemic effect of RBO. The unsaponifiable fraction of RBO **lowers cholesterol** levels. Feeding **phytosterols**, CA, and 24-methylene cycloartanol in amounts present in RBO to hypercholesterolemic rats for 8 weeks indicates that CA alone reduces **cholesterol** and triglyceride levels significantly. Endogenous sterol excretion increases in animals given CA. The accumulation of CA in the liver inhibits **cholesterol** esterase activity, which in turn leads to **reduction** in circulating **cholesterol** levels. CA is structurally similar to **cholesterol** and may compete with the binding sites of **cholesterol** and sequestrate **cholesterol**, which is metabolized to its derivatives. RBO, which is rich in tocopherols and tocotrienols, may improve oxidative stability. Tocotrienols inhibit HMG CoA **reductase**, resulting in **hypocholesterolemia**. The hypolipidemic effect of RBO has also been established in human subjects. Thus, RBO could be a suitable edible oil. . .

ACCESSION NUMBER: 92121598 MEDLINE
DOCUMENT NUMBER: 92121598
TITLE: Nutritional and biochemical aspects of the hypolipidemic action of rice bran oil: a review.

AUTHOR: Rukmini C; Raghuram T C
CORPORATE SOURCE: National Institute of Nutrition, Indian Council of Medical Research, Hyderabad..
SOURCE: JOURNAL OF THE AMERICAN COLLEGE OF NUTRITION, (1991 Dec) 10
(6) 593-601. Ref: 36
Journal code: H51. ISSN: 0731-5724.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199204
SO JOURNAL OF THE AMERICAN COLLEGE OF NUTRITION, (1991 Dec) 10 (6) 593-601. Ref: 36
Journal code: H51. ISSN: 0731-5724.

L6 ANSWER 6 OF 11 MEDLINE
AB . . . fraction of soybean (PUFS) given over 24 weeks to 19 patients with primary types IIa and IIb hyperlipoproteinemia. The percent **reduction** of plasma **cholesterol** in types IIa and IIb were 13.2% and 11.5%, respectively. PUFS significantly reduced LDL **cholesterol** levels, but had little affect on VLDL or HDL **cholesterol**. The triglyceride/**cholesterol** ratio in HDL fraction was also significantly reduced, suggesting that PUFS plays a role in the catabolism of HDL. PUFS contained tocopherol and **unsaturated fatty acid**. The relative impact of the individual components could not be assessed directly, however, it seemed reasonable to conclude that the hypo-**cholesterolemic** effect of PUFS results from a summation effect of plant sterols, tocopherols and **unsaturated fatty acids**.
CT . . .
TU, therapeutic use
Cholesterol: BL, blood
Hypercholesterolemia, Familial: BL, blood
*Hypercholesterolemia, Familial: DT, drug therapy
Lipoproteins, LDL Cholesterol: BL, blood
***Phytosterols**: **TU, therapeutic use**
Soybeans
Triglycerides: BL, blood
CN 0 (Antilipemic Agents); 0 (Lipoproteins, LDL Cholesterol); 0 (**Phytosterols**); 0 (Triglycerides)
ACCESSION NUMBER: 85148557 MEDLINE
DOCUMENT NUMBER: 85148557
TITLE: Effect of the purified unsaponifiable fraction of soybean on primary type II hyperlipoproteinemia.
AUTHOR: Nakashima Y; Nakamura T; Aramaki Y; Kuroiwa A
SOURCE: ARTERY, (1983) 12 (3) 199-211.
Journal code: 8NN. ISSN: 0098-6127.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198506
SO ARTERY, (1983) 12 (3) 199-211.
Journal code: 8NN. ISSN: 0098-6127.

L6 ANSWER 7 OF 11 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
AB . . . onto the Indian market for human use. RBO contains oleic acid (38.4%), linoleic aid (34.4%), and linolenic acid (2.2%) as **unsaturated fatty acids**, and palmitic (21.5%) and stearic (2.9%) acids as saturated fatty acids. The unsaponifiable fraction (4.2%) has total tocopherols (81.3 mg%),. . . and 24-methylene

cycloartanol (494 mg%). Studies on experimental rats demonstrated a hypolipidemic effect of RBO. The unsaponifiable fraction of RBO **lowers cholesterol** levels. Feeding **phytosterols** , CA, and 24-methylene cycloartanol in amounts present in RBO to hypercholesterolemic rats for 8 weeks indicates that CA alone reduces **cholesterol** and triglyceride levels significantly. Endogenous sterol excretion increases in animals given CA. The accumulation of CA in the liver inhibits **cholesterol** esterase activity, which in turn leads to **reduction** in circulating **cholesterol** levels. CA is structurally similar to **cholesterol** and may compete with the binding sites of **cholesterol** and sequestrate **cholesterol**, which is metabolized to its derivatives. RBO, which is rich in tocopherols and tocotrienols, may improve oxidative stability. Tocotrienols inhibit HMG CoA **reductase**, resulting in **hypocholesterolemia**. The hypolipidemic effect of RBO has also been established in human subjects. Thus, RBO could be a suitable edible oil.
. .

ACCESSION NUMBER: 92262702 EMBASE
DOCUMENT NUMBER: 1992262702
TITLE: Nutritional and biochemical aspects of the hypolipidemic action of rice bran oil: A review.
AUTHOR: Rukmini C.; Raghuram T.C.
CORPORATE SOURCE: National Institute of Nutrition,Hyderabad 500007, India
SOURCE: Journal of the American College of Nutrition, (1991) 10/6 (593-601).
ISSN: 0731-5724 CODEN: JONUDL
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 006 Internal Medicine
017 Public Health, Social Medicine and Epidemiology
018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
SO Journal of the American College of Nutrition, (1991) 10/6 (593-601).
ISSN: 0731-5724 CODEN: JONUDL

L6 ANSWER 8 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Oil and fat composition containing **phytosterol** for preparation of food and pharmaceuticals.
AB WO 9959423 UPAB: 20000330
NOVELTY - Composition comprises a **phytosterol** dissolved in an oil and fat comprising one or more polyhydric alcohol/fatty acid esters each having an esterification degree of. . . more and containing at least one unesterified hydroxyl group.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a **phytosterol** containing food which comprises one or more lipid ingredients comprising at least 15 wt.% one or more diacylglycerols. The weight ratio of diacylglycerols to **phytosterol** is 10-100.
USE - Used for preparation of oil in water type fat-processed foods such as drinks, desserts, ice creams,. . . cakes, cookies, pies, breads and chocolates, and other foods including bakery mixes, processed meat products, frozen entrees and frozen foods, **hypocholesteremic** preparation in the form of a capsule, sugar-coated tablet, molded granules, candy or drop.
ADVANTAGE - Blood cholesterol level is. . . good workability, and the flavor and feeling of food items are not changed. Generation of smoking during cooking is eliminated. **Phytosterol** is solubilized by the composition.
Dwg.0/0
TECH. . .
esterification degree of 2-4.5 and comprises glycerol/fatty acid esters, polyglycerol/fatty acid esters, sucrose/fatty acid esters or sorbitan/fatty acid esters. The **phytosterol** is contained in an

amount of 1.2 wt.% or more. 55 wt.% Fatty acids contained in diacylglycerols are **unsaturated fatty acids**. The composition is a frying oil.

TT TT: OIL FAT COMPOSITION CONTAIN **PHYTOSTEROL** PREPARATION FOOD PHARMACEUTICAL.

ACCESSION NUMBER: 2000-105555 [09] WPIDS
CROSS REFERENCE: 1999-571935 [48]
DOC. NO. CPI: C2000-031612
TITLE: Oil and fat composition containing **phytosterol** for preparation of food and pharmaceuticals.
DERWENT CLASS: A96 B01 D13
INVENTOR(S): GOTO, N; NISHIDE, T; TANAKA, Y; YASUKAWA, T
PATENT ASSIGNEE(S): (KAOS) KAO CORP
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9959423	A1	19991125	(200009)*	EN	26
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: BR CA CN SG					
US 6025348	A	20000215	(200016)#		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9959423	A1	WO 1998-JP2228	19980521
US 6025348	A	US 1998-69754	19980430

PRIORITY APPLN. INFO: WO 1998-JP2228 19980521; US 1998-69754 19980430

L6 ANSWER 9 OF 11 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

TI . . . risk of cardiovascular or lipid diseases, diabetes and thyroid disease - using as risk indicator the ratio of campesterol to beta-**sitosterol** in the serum, also treatment of these disorders with **phytosterol**(s).

AB WO 9801759 UPAB: 19980302
The ratio (R), in serum, of campesterol (I) to beta -**sitosterol** (II) is determined, compared with that in a normal control and used as an indicator of increased risk of cardiovascular. . . Also claimed are: (1) method for assessing risk of cardiovascular and lipid disorders by measuring (R), serum levels of total **phytosterols** (TP) and total cholesterol (TC) and comparing all 3 values with those of normal controls;
(2) method for increasing the inhibitory effect of **phytosterols** (III) on enterocyte absorption of cholesterol (IV) by administering (III) that inhibits absorption of (IV) and/or (II); (3) (IV)-lowering composition. . . treatment of diabetes and thyroid disease or dietary modification to increase TP and (R). (III) are hydrophobic, particularly (I) and **sitosterol**, and may be supplied as safflower, sesame seed, maize, rice bran, olive, rapeseed, flaxseed or coconut oils. Particularly (III) are administered together with (i) at least 1 inhibitor of (IV) biosynthesis, especially (A); (ii) one or more saturated or mono/poly-**unsaturated fatty acids** (also providing a synergistic effect) or (iii) plant oils as specified above. Optionally the composition of (3) also includes 2-6%. . . of the (IV) level, e.g. in subjects with apparently normal (IV) level. (III) lowers serum TC and low-density lipoprotein (LDL) **cholesterol**, but increases HDL and the HDL/LDL ratio, and there is a synergistic effect when used with inhibitors (A) of 3-hydroxy-3-methylglutaryl coenzyme A **reductase**, allowing a **reduction** in the dose of (A), and

thus of side effects.
Dwg.1/13

TT TT: DIAGNOSE RISK CARDIOVASCULAR LIPID DISEASE DIABETES THYROID DISEASE RISK INDICATE RATIO BETA **SITOSTEROL** SERUM TREAT DISORDER **PHYTOSTEROL**.

ACCESSION NUMBER: 1998-101200 [09] WPIDS
DOC. NO. NON-CPI: N1998-081048
DOC. NO. CPI: C1998-033490
TITLE: Diagnosing risk of cardiovascular or lipid diseases, diabetes and thyroid disease - using as risk indicator the ratio of campesterol to beta-**sitosterol** in the serum, also treatment of these disorders with **phytosterol**(s).
DERWENT CLASS: B04 D16 S03
INVENTOR(S): NOVAK, E
PATENT ASSIGNEE(S): (FORB-N) FORBES MEDI-TECH INC
COUNTRY COUNT: 74
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9801759	A1	19980115	(199809)*	EN	93
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN YU					
AU 9732518	A	19980202	(199826)		
EP 912900	A1	19990506	(199922)	EN	
R: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI					
US 5965449	A	19991012	(199949)		
CZ 9900011	A3	20000112	(200009)		
HU 9904042	A2	20000328	(200025)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9801759	A1	WO 1997-CA474	19970703
AU 9732518	A	AU 1997-32518	19970703
EP 912900	A1	EP 1997-928091	19970703
		WO 1997-CA474	19970703
US 5965449	A	US 1996-675018	19960703
CZ 9900011	A3	WO 1997-CA474	19970703
		CZ 1999-11	19970703
HU 9904042	A2	WO 1997-CA474	19970703
		HU 1999-4042	19970703

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9732518	A	Based on	WO 9801759
EP 912900	A1	Based on	WO 9801759
CZ 9900011	A3	Based on	WO 9801759
HU 9904042	A2	Based on	WO 9801759

PRIORITY APPLN. INFO: US 1996-675018 19960703

L6 ANSWER 10 OF 11 BIOSIS COPYRIGHT 2000 BIOSIS
AB. . . onto the Indian market for human use. RBO contains oleic acid (38.4%), linoleic acid (34.4%), and linolenic acid (2.2%) as **unsaturated fatty acids**, and palmitic (21.5) and stearic (2.9%) acids as saturated fatty acids. The unsaponifiable fraction (4.2%) has total tocopherols (81.3% mg%),. . . and

24-methylene cycloartanol (494 mg%). Studies on experimental rats demonstrated a hypolipidemic effect of RBO. The unsaponifiable fraction of RBO **lowers cholesterol** levels. Feeding **phytosterols**, CA, and 24-methylene cycloartanol in amounts present in RBO to hypercholesterolemic rats for 8 weeks indicates that CA alone reduces **cholesterol** and triglyceride levels significantly. Endogenous sterol excretion increases in animals given CA. The accumulation of CA in the liver inhibits **cholesterol** esterase activity, which in turn leads to **reduction** in circulating **cholesterol** levels. CA is structurally similar to **cholesterol** and may compete with the binding sites of **cholesterol** and sequestrate **cholesterol**, which is metabolized to its derivatives. RBO, which is rich in tocopherols and tocotrienols, may improve oxidative stability. Tocotrienols inhibit HMG CoA **reductase**, resulting in **hypocholesterolemia**. The hypolipidemic effect of RBO has also been established in human subjects. Thus, RBO could be a suitable edible oil. . .

ACCESSION NUMBER: 1992:75496 BIOSIS
DOCUMENT NUMBER: BA93:43951
TITLE: NUTRITIONAL AND BIOCHEMICAL ASPECTS OF THE HYPOLIPIDEMIC ACTION OF RICE BRAN OIL A REVIEW.
AUTHOR(S): RUKMINI C; RAGHURAM T C
CORPORATE SOURCE: NATL. INST. NUTRITION, HYDERABAD 500007, INDIA.
SOURCE: J AM COLL NUTR, (1991) 10 (6), 593-601.
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AB The effects of dietary fats and **phytosterol** on the fatty acid composition and lipoprotein cholesterol in serum were studied in female rats with the following results. The. . . due to an increase in the lower density lipoprotein (LDL + VLDL [very low density lipoprotein]). The addition of 5% **phytosterol** to the 10% butter-cholesterol diet reduced the total cholesterol level and increased the ratio of cholesterol in high density lipoprotein. . . = 0.947), and also the level of LDL + VLDL-cholesterol (r = 0.935). Cod liver oil, wheat germ oil and **phytosterol** induce an increase in the PUFA/SFA ratio, promote **hypocholesterolemia** and change lipoprotein concentration. There were indications that no relationship exists between the change in the total cholesterol level and. . .
IT Miscellaneous Descriptors
COD LIVER OIL WHEAT GERM OIL POLY **UNSATURATED FATTY -ACID** SATURATED FATTY-ACID HYPO CHOLESTEROLEMIA OLEIC-ACID
ACCESSION NUMBER: 1984:349467 BIOSIS
DOCUMENT NUMBER: BA78:85947
TITLE: EFFECTS OF DIETARY FATS AND PHYTO STEROL ON SERUM FATTY-ACID COMPOSITION AND LIPO PROTEIN CHOLESTEROL IN RATS.
AUTHOR(S): HIRAI K; OHNO Y; NAKANO T; IZUTANI K
CORPORATE SOURCE: DEP. NUTR. BIOCHEM., FAC. SCI. LIVING, OSAKA CITY UNIV., SUMIYOSHI, OSAKA 558, JPN.
SOURCE: J NUTR SCI VITAMINOL, (1984) 30 (2), 101-112.
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